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QUALITY CONTROL QUALITY ASSURANCE PLAN FOR TANK CLOSURE OF ABOVEGROUND STORAGE TANK 2505 (AST 2505) AND OIL AND WATER SEPARATOR REMOVAL CNC CHARLESTON SC

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SOLUTIONS TO ENVIRONMENTAL PROBLEMS, INC.

FINAL

QUALITY CONTROL/QUALITY ASSUARANCE PLAN

TANK CLOSURE OF ABOVEGROUND STORAGE TANK 2505 AND OIL/WATER SEPARATOR REMOVAL CHARLESTON NAVAL COMPLEX ANNEX CHARLESTON, SOUTH CAROLINA

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Submitted to:
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Naval Facilities Engineering Command

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and of Oil/Water Separator Removal
Charleston, South Carolina

Quality Control Plan

1.0 INTRODUCTION

This plan provides the Quality Assurance/Quality Control (QA/QC) requirements for closure of aboveground storage tank (AST) 2505, and removal of the connecting oil/water separator (OWS) and associated piping and equipment at the Charleston Naval Complex Annex, Charleston, South Carolina.

2.0 QUALITY CONTROL PROGRAM

The QC program shall cover both on-site work and off-site reporting/documentation, and shall coincide with the Work Plan sequence. The QC program consists of:

- a QC Manager;
- a QC Plan;
- QC briefings;
- on-site QC work control; and
- QC certifications, sampling QC, chain of custody, certified laboratory, and sampling records and logs.

3.0 QUALITY CONTROL ORGANIZATION

As needed, the Project QC Manager will be at the work site, to ensure that work is performed in accordance with the work plan. The QC Manager will conduct the QC briefings, provide on site QC surveillance, perform sampling, and prepare required QC certifications and documentation. In addition to on-site QC, the QC Manager may perform other duties, such as Site Supervisor. The QC manager has the authority to stop work based on quality or safety concerns.

The QC manager shall have a minimum of five years experience as an engineer, technician, inspector, quality/safety specialist, supervisor, or project manager. Additionally, the QC manager must be familiar with the QA/QC requirements involved in petroleum tank work, and trained or experienced in environmental sampling.

4.0 QUALITY CONTROL PLAN

The QC Plan depends not only on the QC Manager, but also on workers involved in the project. The QC Plan covers both on site and office work.

The QC Manager may make changes to the Quality Control Plan. These changes will be site specific and in the form of a clarification or in response to an unknown or unexpected work site condition.

5.0 QUALITY CONTROL BRIEFINGS

Prior to the start of site work, the QC Manager shall conduct an initial QC briefing. The purpose of the briefing is to familiarize the workers with the QC aspects of the work. The briefing may be held in conjunction with the initial safety briefing.

6.0 THREE PHASES OF CONTROL

The QC Manager shall examine the work using the "three phases of control" approach to ensure that work complies with all requirements. The three phases of control are:

Preparatory Phase	This phase is performed prior to the start of work to ensure that preparations for work are complete.
Initial Phase	This phase of control centers on observation of the work performance as it relates to the Work Plan, Environmental Protection Plan, and the Health and Safety Plan (HASP).
Follow-Up Phase	This phase involves examining completed tasks to ensure that the work was properly done.

6.1 Preparatory QC Phase

- Conduct the preparatory phase surveillance/inspection/review with the Site Supervisor responsible for the work.
- Review the Work Plan and Environmental Protection Plan.
- Check staged materials and equipment to ensure that they are on hand, ready for use, and conform to the Work Plan.
- Examine the work site to ensure that the area is satisfactory and ready for work to begin.
- Ensure that training requirements are met, documented, and on file.
- Discuss work/construction methods and controls.
- Review the HASP to ensure that applicable safety requirements are meet and that required Material Safety Data Sheets (MSDS) are included with the HASP.

6.2 Initial QC Phase

- The Site Supervisor will observe the initial segment of each new Work Phase to ensure that the work complies with the work plan.
- Establish that the quality of workmanship is satisfactory.
- Ensure that applicable safety requirements are met.

6.3 Follow-Up Phase (for ongoing work daily, as necessary)

- Ensure the work is in compliance with all requirements.
- Maintain the quality of workmanship.
- Ensure that sampling and field analysis is performed and properly recorded, if necessary.

7.0 SAMPLING AND ANALYSIS

It is anticipated that soil samples will not be required for tank closure since the tank is within an area that is part of a Resource Conservation and Recovery (RCRA) Facility Investigation. If necessary, residual tank sludge will be sampled and tested in accordance with the Toxicity

Characteristic Leaching Procedure (TCLP) 40 CFR 261 to determine if the residue is a hazardous waste.

Any field sampling and analysis will be performed by, or under the direction of trained personnel. The QC Officer will have had training or experience in environmental sampling and ensure that proper samples, sampling methods, preservation, and shipping comply with the requirements set forth by the laboratory. The QC Manager will be on site for all environmental sampling at the tank area.

7.1 Accredited Laboratories

A laboratory approved by the NAVY and certified by SCDHEC using Environmental Protection Agency (EPA) analytical methods must perform the analyses. The laboratory report of analytical results must include the SC laboratory identification number.

7.2 Test Results

Laboratory test results will be included in the "*Underground Storage Tank (UST) Assessment Report.*" Test results shall be signed by a testing laboratory representative and include the laboratory's assigned SC laboratory identification number.

7.3 Chain of Custody

Chain of Custody Records provided by the laboratory performing the analysis will be used for all samples. Several samples may be entered on the chain of custody report, but a new chain of custody will be initiated for each worker taking samples. Samples will be temporarily maintained in a cooler at the work site, but the sampler must be able to maintain visual surveillance of the samples/cooler or relinquish custody to the Site Supervisor or another designated worker. When each series of samples are complete, the sample cooler shall be delivered to a representative of the applicable laboratory. A copy of the chain of custody report with the acceptance signature will be returned to the QC Manager. A copy of the final chain of custody report will be forwarded to the QC manager with the laboratory analysis.

7.4 Closure Report Framework

The UST Assessment Report (Appendix A of the Work Plan) will be completed for the tank closure.

8.0 WORK LOG

The Project Manager or a designee will keep the work log in a bound field logbook. The log will cover a chronology of the tank work recorded in brief statements. Examples of information entered in the Work Log are:

- a log of work performed;
- PPE, PPE changes and reasons for the change;
- notes on required information needed for the completion report; and
- sketches of the site including length and distances of piping, tank, excavation, and depth to groundwater if encountered.

The Work Log will be signed and dated each day and will be maintained with the Work Procedures after completion of the work.

9.0 REFERENCES

EPA, *Criteria for Identifying the Characteristics of Hazardous Waste and Listing Hazardous Wastes*, 40 CFR 261.

EPA, *Standards for the Management of Used Oil*, 40 CFR 279.

EPA, *Standards for Owners and Operators of Underground Storage Tanks*, 40 CFR 280.

EPA SOPQAM, *Operating Procedures and Quality Assurance Manual.*

SCDHEC, *Hazardous Waste Management Regulations,* R.61-92.

SCDHEC, *Underground Storage Tank Control Regulations*, R.61-79.

SCDHEC GWPD UST, *Underground Storage Tank Assessment Guidelines Guidelines*.

SCDEH, *South Carolina Risk-Based Corrective Action for Petroleum Releases Guidelines*.